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ATTORNEY DOCKET NO. 11470BAUS01U (NORT10-00350)
U.S. SERIAL NO. 09/577,292
PATENT

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A method of admitting calls over a network, comprising:
 - receiving a call request for establishing to establish a call, and capable of affecting a network resource, the call request operable for defining a throughput requirement and comprising an origination address for identifying an origination terminal and an identifier for identifying a destination terminal;
 - transmitting a throughput measurement request, the throughput measurement request causing a trace to propagate via a path between the origination terminal and the destination terminal;
 - in response to the trace, receiving information identifying one or more network resources on the path between the origination terminal and the destination terminal;
 - monitoring one or more performance characteristics of the one or more network resources identified to generate a throughput measurement of the path; and
 - transmitting a call admission response to the origination terminal when the throughput measurement at least substantially matches the throughput requirement of the call request.
2. (Currently Amended) The method of claim 1, further comprising selecting one of the one or more network resource as a resource candidate for use in the requested call.
3. (Currently Amended) The method of claim 2, wherein the selecting one of the one or more

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network resource is based on the call admission response.

4. (Currently Amended) The method of claim 2, wherein the selecting one of the one or more network resources is determined by usage policy of a policy server.
5. (Original) The method of claim 1, wherein the throughput requirement relates to a perceptible quality of service.
6. (Original) The method of claim 1, wherein the throughput requirement is specified in a packet header.
7. (Original) The method of claim 1, wherein the throughput requirement complies with Resource Reservation Protocol (RSVP).
8. (Original) The method of claim 1, wherein the throughput requirement complies with Diffserv Protocol.
9. (Original) The method of claim 1, wherein the throughput requirement complies with MultiProtocol Label Switching (MPLS) Protocol.

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10. (Original) The method of claim 1, wherein the call request complies with Session Initiation Protocol.
11. (Currently Amended) The method of claim 1, wherein the call request comprises a list of resource elements supported by the origination terminal, and further comprising ranking the resource elements network resources according to a merit rating, the merit rating being based on the throughput measurement of the network resource.
12. (Currently Amended) The method of claim 11, further comprising selecting a resource element resources according to the merit rating for use by the origination terminal.
13. (Canceled).
14. (Original) The method of claim 1, wherein the throughput measurement request comprises at least one trace packet.
15. (Original) The method of claim 1, wherein the throughput measurement request comprises a trace route.
16. (Previously Presented) The method of claim 1, wherein the information received in response

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to the trace comprises one or more hops.

17. (Previously Presented) The method of claim 16, wherein the monitoring further comprises monitoring the one or more hops.

18. (Original) The method of claim 1, further comprising selecting one or more sizes of a data packet as candidates for carrying audio data in the requested call.

19. (Currently Amended) The method of claim 1, further comprising selecting an alternative path resource as the network resource when the throughput measurement does not substantially match the throughput requirement of the call request.

20. (Currently Amended) The method of claim 19, wherein the alternative path resource comprises a switched telephone network.

21. (Currently Amended) The method of claim 19, wherein the alternative path resource comprises a dedicated communications link interconnecting network resources.

22. (Original) The method of claim 1, further comprising transmitting an alternative resource call admission response when the throughput measurement does not substantially match the

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throughput requirement of the call request.

23. (Currently Amended) The method of claim 1, further comprising determining a condition of the one or more network resources.

24. (Original) The method of claim 23, wherein the determining includes determining a delay in the throughput measurement in the network.

25. (Original) The method of claim 23, wherein the determining includes determining a percentage of packet loss in the network.

26. (Currently Amended) The method of claim 23, further comprising determining an expected quality of service based on the determined condition of the one or more network resources.

27. (Original) The method of claim 1, further comprising performing call admission control to accept or deny the call request.

28. (Original) The method of claim 27, wherein performing call admission control is based on usage of a link in the network.

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29. (Original) The method of claim 27, wherein at least two terminals are defined in at least two communities coupled by a link in the network, and wherein performing call admission control includes performing call admission control based on a policy for the link between the communities.
30. (Original) The method of claim 29, further comprising bypassing the call admission control within at least one community.
31. (Previously Presented) The method of claim 1, wherein one of the call request, the throughput measurement request, the information received in response to the trace and the call admission response is communicated over a data bus.

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32. (Currently Amended) An apparatus for admitting calls over a network, comprising:
- a receiver for receiving a call request ~~for establishing~~ to establish a call ~~and capable of~~ affecting a network resource, the call request operable for defining a throughput requirement and comprising an origination address for identifying an origination terminal and an identifier for identifying a destination terminal;
- a transmitter for transmitting a throughput measurement request, the throughput measurement request causing a trace to propagate via a path between the origination terminal and the destination terminal;
- a receiver for receiving, in response to the trace, information identifying one or more network resources on the path between the origination terminal and the destination terminal;
- a monitor for monitoring one or more performance characteristics of the one or more network resources identified to generate a throughput measurement of the path; and
- a transmitter for transmitting a call admission response to the origination terminal when the throughput measurement at least substantially matches the throughput requirement of the call request.

33. (Currently Amended) The apparatus of claim 32, further comprising a selector to select one of the one or more network resources as a resource candidate for use in the requested call.

34. (Currently Amended) The apparatus of claim 33, wherein the selector is adapted to select

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one of the one or more network resources based on the call admission response.

35. (Currently Amended) The apparatus of claim 33, wherein the selector is adapted to select
one of the one or more network resources based on a usage policy of a policy server.

36. (Original) The apparatus of claim 32, wherein the throughput requirement relates to a
perceptible quality of service.

37. (Original) The apparatus of claim 32, wherein the throughput requirement is specified
in a packet header.

38. (Original) The apparatus of claim 32, wherein the throughput requirement complies with
Resource Reservation Protocol (RSVP).

39. (Original) The apparatus of claim 32, wherein the throughput requirement complies with
Diffserv Protocol.

40. (Original) The apparatus of claim 32, wherein the throughput requirement complies with
MultiProtocol Label Switching (MPLS) Protocol.

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41. (Original) The apparatus of claim 32, wherein the call request complies with Session Initiation Protocol.

42. (Currently Amended) The apparatus of claim 32, wherein the call request comprises a list of resource elements supported by the origination terminal, and the apparatus further comprises comprising a controller adapted to rank the resource elements network resources according to a merit rating, the merit rating being based on the throughput measurement of the network resource.

43. (Currently Amended) The apparatus of claim 42, further comprising a selector to select a resource element the network resource according to the merit rating for use by the origination terminal.

44. (Canceled).

45. (Original) The apparatus of claim 32, wherein the throughput measurement request comprises at least one trace packet.

46. (Original) The apparatus of claim 32, wherein the throughput measurement request comprises a trace route.

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47. (Original) The apparatus of claim 32, further comprising a selector for selecting one or more sizes of a data packet as candidates for carrying audio data in the requested call.

48. (Currently Amended) The apparatus of claim 32, further comprising a selector for selecting an alternative path resource as the network resource when the throughput measurement does not substantially match the throughput requirement of the call request.

49. (Currently Amended) The apparatus of claim 48, wherein the alternative path resource comprises a switched telephone network.

50. (Currently Amended) The apparatus of claim 48, wherein the alternative path resource comprises a dedicated communications link interconnecting network resources.

51. (Original) The apparatus of claim 32, further comprising a transmitter for transmitting an alternative resource call admission response when the throughput measurement does not substantially match the throughput requirement of the call request.

52. (Currently Amended) The apparatus of claim 32, further comprising a controller adapted to determine a condition of the one or more network resources.

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53. (Currently Amended) The apparatus of claim 52, wherein the controller adapted to determine a condition of the one or more network resources is further adapted to determine a delay in the throughput measurement.

54. (Currently Amended) The apparatus of claim 52, wherein the controller adapted to determine a condition of the one or more network resources is further adapted to determine a percentage of packet loss in the network.

55. (Currently Amended) The apparatus of claim 52, wherein the controller adapted to determine a condition of the one or more network resources is further adapted to determine an expected quality of service based on the determined condition of the network resource.

56. (Original) The apparatus of claim 32, further comprising a call admission control device for accepting or denying the call request.

57. (Original) The apparatus of claim 56, wherein the call admission control device is adapted to admit the call based on usage of a link in the network.

58. (Original) The apparatus of claim 56, wherein at least two terminals are defined in at least two communities coupled by a link in the network, and wherein the call admission control

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device performs call admission control based on a policy for the link between the communities.

59. (Original) The apparatus of claim 58, further comprising a bypass path for bypassing the call admission control device within at least one community.

60. (Previously Presented) The apparatus of claim 32, wherein one of the call request, the throughput measurement request, the information received in response to the trace and the call admission response is communicated over a data bus.

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61. (Currently Amended) An article including one or more machine-readable storage media containing instructions to manage calls within a telephony system, the instructions when executed causing a controller to:

receive a call request to establish for establishing a call, and capable of affecting a network resource, the call request operable for defining a throughput requirement and comprising an origination address for identifying an origination terminal and an identifier for identifying a destination terminal;

transmit a throughput measurement request, the throughput measurement request causing a trace to propagate via a path between the origination terminal and the destination terminal;

in response to the trace, receive information identifying one or more network resources on the path between the origination terminal and the destination terminal;

monitor one or more performance characteristics of the one or more network resources identified to generate a throughput measurement of the path; and

transmit a call admission response to the origination terminal when the throughput measurement at least substantially matches the throughput requirement of the call request.

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62. (Canceled).

63. (Currently Amended) A call server comprising:

means for receiving a call request to establish for establishing a call, and capable of affecting a network resource; the call request operable for defining a throughput requirement and comprising an origination address identifying an origination terminal and an identifier for identifying a destination terminal;

means for transmitting a throughput measurement request, the throughput measurement request causing a trace to propagate via a path between the origination terminal and the destination terminal;

means for receiving information identifying, in response to the trace, one or more network resources on the path between the origination terminal and the destination terminal;

monitoring one or more performance characteristics of the one or more network resources identified to generate a throughput measurement of the path; and

means for transmitting a call admission response to the origination terminal when the throughput measurement at least substantially matches the throughput requirement of the call request.

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64. (Previously Presented) The apparatus of claim 32, wherein the information received in response to the trace comprises one or more hops

65. (Previously Presented) The apparatus of claim 64, wherein the monitor is further operable for monitoring the one or more hops.

66. (New) The method of claim 12, wherein the selected resource element is a codec supported by the origination terminal.

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